

REMARKS

Claims 1-38, 40-55, and 57-61 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-7, 12, 47-53, 59-60 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144505) in view of Nishida (U.S. Pub. No. 2003/0146742). This rejection is respectfully traversed.

Independent Claims 1 and 2 have been amended to recite switching means for switching a connection of the actuator from the driving circuit to the residual vibration detecting means after carrying out the droplet ejection operation by driving the actuator. This subject matter was previously found in Claims 39 and 56. No new matter has been added.

Neither Nishihara nor Nishida teach or suggest a droplet ejection apparatus including switching means for switching a connection of the actuator from the driving circuit to the residual vibration detecting means after carrying out the droplet ejection operation by driving the actuator. Because this subject matter is neither taught nor suggested by either Nishihara or Nishida, Applicants respectfully assert that Claims 1 and 2 and their corresponding dependent claims would not have been obvious in view of these references.

Claims 50 and 51 have also been amended and rewritten. That is claims 50 and 51 now recite detecting a residual vibration of a diaphragm displaced by an actuator in a

droplet ejection head after carrying out a droplet ejection operation by driving the actuator with a driving circuit by switching a connection of the actuator from the driving circuit to the residual vibration detecting means. As stated above, switching a connection of the actuator from the driving circuit to the residual vibration detecting means was previously found in claims 39 and 56. No new matter has been added.

As also stated above, neither Nishihara nor Nishida teach or suggest switching a connection of the actuator from the driving circuit to the residual vibration detecting means after carrying out the droplet ejection operation by driving the actuator. Because this subject matter is neither taught nor suggested by either Nishihara or Nishida, Applicants respectfully asserts that claims 50 and 51, and each corresponding dependent claim, would not have been obvious.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Usui (U.S. Pub. No. 2003/0043216). This rejection is respectfully traversed.

Claim 8 ultimately depends from independent Claim 1, addressed above. Claim 8 would not have been obvious for at least the same reasons.

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Fujii (U.S. Pub. No. 2001/0007460). This rejection is respectfully traversed.

Claims 9 and 10 ultimately depend from independent Claim 1, addressed above. Claims 9 and 10 would not have been obvious for at least the same reasons.

Claims 11 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Ishingaga (U.S. Pub. No. 2002/0149637). This rejection is respectfully traversed.

Claims 11 and 54 ultimately depend from either independent Claim 1 or independent Claim 2, addressed above. These claims would not have been obvious for at least the same reasons.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Kawamura (U.S. Pat. No. 4,577,203). This rejection is respectfully traversed.

Claim 13 ultimately depends from independent Claim 1, addressed above. Claim 13 would not have been obvious for at least the same reasons.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Koitabashi (U.S. Pub. No. 2002/0021325). This rejection is respectfully traversed.

Claim 14 ultimately ultimately depends from independent Claim 1, addressed above. Claim 14 is not obvious for at least the same reasons.

Claims 15, 16, 18, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and Koitabashi (U.S. Pub. No. 2002/0021325), and further in view of Sakagami (U.S. Pub. No. 2005/0122360). This rejection is respectfully traversed.

Claims 15, 16, 18, and 22 ultimately depend from independent Claim 1, addressed above. These claims would not have been obvious for at least the same reasons.

Furthermore, Applicant respectfully asserts that Sakagami only qualifies as prior art under 35 U.S.C. § 102(e). This is significant because Sakagami is commonly owned by Seiko Epson Corporation.

STATEMENT OF COMMON OWNERSHIP

The present application Serial No. 10/824,335 filed on April 14, 2004, and Sakagami, U.S. Serial No. 10/797,594 filed March 10, 2004, were, at the time the present invention was made, commonly owned by Seiko Epson Corporation.

Because Sakagami only qualifies as prior art under 35 U.S.C. § 102(e) and is commonly owned by Seiko Epson Corporation, Applicants respectfully assert that Sakagami may not be used as a reference in rejecting the claims under 35 U.S.C.

§ 103(a). Accordingly, Applicant respectfully asserts that Claims 15, 16, 18 and 22 are in condition for allowance.

Claims 17, 20, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and Koitabashi (U.S. Pub. No. 2002/0021325), and further in view of Baezner (U.S. Pat. No. 5,581,287). This rejection is respectfully traversed.

Claims 17, 20, and 23 ultimately depend from independent Claim 1, addressed above. These claims would not have been obvious for at least the same reasons.

Claims 19 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and Koitabashi (U.S. Pub. No. 2002/0021325), and further in view of Noyes (U.S. Pat. No. 6,364,452). This rejection is respectfully traversed.

Claims 19 and 21 ultimately depend from independent Claim 1, addressed above. These claims would not have been obvious for at least the same reasons.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and Ishinaga (U.S. Pub. No. 2002/0149637), and further in view of Usui (U.S. Pat. No. 6,820,955). This rejection is respectfully traversed.

Claim 24 ultimately depends from independent Claim 1, addressed above. This claim would not have been obvious for at least the same reasons.

Claims 25-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), Ishinaga (U.S. Pub. No. 2002/0149637), and Usui (U.S. Pat. No. 6,820,955) and further in view of Yamaguchi (U.S. Pat. No. 5,379,061). This rejection is respectfully traversed.

Claims 25-33 ultimately depend from independent Claim 1, addressed above. These claims would not have been obvious for at least the same reasons.

Claim 34 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), Ishinaga (U.S. Pub. No. 2002/0149637), and Usui (U.S. Pat. No. 6,820,955), and further in view of Fujii (U.S. Pub. No. 2001/0007460). This rejection is respectfully traversed.

Claim 34 ultimately depends from independent Claim 1, addressed above. Claim 34 would not have been obvious for at least the same reasons.

Claim 35 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), Ishinaga (U.S. Pub. No. 2002/0149637), and Usui (U.S. Pat. No.

6,820,955), and further in view of Hayakawa (U.S. Pub. No. 2002/0130918). This rejection is respectfully traversed.

Claim 35 ultimately depends from independent Claim 1, addressed above. Claim 35 would not have been obvious for at least the same reasons.

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), Ishinaga (U.S. Pub. No. 2002/0149637), Usui (U.S. Pat. No. 6,820,955), and Hayakawa (U.S. Pub. No. 2002/0130918), and further in view of Takahashi (U.S. Pub. No. 2001/0002837). This rejection is respectfully traversed.

Claim 36 ultimately depends from independent Claim 1, addressed above. Claim 36 would not have been obvious for at least the same reasons.

Claim 37 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), Ishinaga (U.S. Pub. No. 2002/0149637), and Usui (U.S. Pat. No. 6,820,955), and further in view of Ho (U.S. Pub. No. 2003/0007032). This rejection is respectfully traversed.

Claim 37 ultimately depends from independent Claim 1, addressed above. Claim 37 would not have been obvious for at least the same reasons.

Claims 38 and 55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No.

2003/0146742), and further in view of Kono (U.S. Pat. No. 6,322,190). This rejection is respectfully traversed.

Claims 38 and 55 ultimately either depend from independent Claim 1 or Claim 2, addressed above. Claims 38 and 55 would not have been obvious for at least the same reasons.

Claims 39-41, 56, and 57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Sakagami (U.S. Pub. No. 2004/0239714). This rejection is respectfully traversed.

Claims 39 has been amended into independent Claim 1. Applicant respectfully asserts that the combination of Claim 1 and 39 would not have been obvious in view of Nishihara, Nishida, and Sakagami, because Sakagami only qualifies as prior art under 35 U.S.C. § 102(e). This is significant because Sakagami is commonly owned by Seiko Epson Corporation.

STATEMENT OF COMMON OWNERSHIP

The present application Serial No. 10/824,335 filed on April 14, 2004, and Sakagami, U.S. Serial No. 10/797,594 filed March 10, 2004, were, at the time the present invention was made, commonly owned by Seiko Epson Corporation.

As stated above, Sakagami only qualifies as prior art under 35 U.S.C. § 102(e). Furthermore, because Sakagami is commonly owned by Seiko Epson Corporation,

Sakagami may not be used in a rejection under 35 U.S.C. § 103. Accordingly, Claims 39-41, 56, and 57 would not have been obvious. Furthermore, Applicants respectfully assert that these claims are in condition for allowance.

Claims 42-46 and 58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Sakagami (U.S. Pub. No. 2005/0122360). This rejection is respectfully traversed.

Claims 42-46 and 58 ultimately depend from either independent Claim 1 or Claim 2, addressed above. These claims would not have been obvious for at least the same reasons.

Moreover, as stated earlier, Sakagami '360 is commonly owned by Seiko Epson Corporation. Accordingly, Sakagami may not be used in a rejection under 35 U.S.C. § 103 against the claimed invention.

Claim 61 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara (U.S. Pub. No. 2002/0144550) in view of Nishida (U.S. Pub. No. 2003/0146742), and further in view of Usui (U.S. Pat. No. 6,820,955). This rejection is respectfully traversed.

Claim 61 depends from independent Claim 51, addressed above. Claim 61 would not have been obvious for at least the same reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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